

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) An axial-flow fan, comprising:

a main shaft;

a plurality of main fins provided on the outer circumference of the main shaft, the main fins being inclined relative to an axial direction of the main shaft, where a front end in a rotary direction of the main ~~fin~~ fins is located on an intake side and a rear end in the rotary direction of the main ~~fin~~ fins is located on an exhaust side when the axial-flow fan ~~transfers an~~ transfers air; and

an auxiliary fin provided between mutually adjoining main fins,

wherein the height of the auxiliary fin from the front end to the rear end in the rotary direction of the auxiliary fin along the axial direction of the main shaft is not less than the half and not more than four fifths of the height of the main ~~fin~~ fins from the front end to the rear end of the main ~~fin~~ fins in the rotary direction along the axial direction of the main shaft, and

wherein, when the main fins are arranged by a pitch W , the front end in the rotary direction of the auxiliary fin is located within $-1/8 \times W$ to $+1/8 \times W$ along the rotary direction from the front end in the rotary direction of the main ~~fin~~ fins adjoining in a reverse rotary direction.

2. (Currently Amended) The axial-flow fan according to claim 1, wherein the rear end in the rotary direction of the auxiliary fin is spaced apart from the rear end in the rotary direction of the main ~~fin~~ fins adjoining in the reverse rotary direction by $1/2 \times W$ in the rotary direction.

3. (Currently Amended) The axial-flow fan according to claim 1, wherein, when an attachment angle of the auxiliary fin relative to the main shaft is θ_2 and an attachment angle of the main ~~fin~~fins relative to the main shaft is θ_1 , the maximum of θ_2 is represented as $\theta_2 = \theta_1 + 5^\circ$.

4. (Currently Amended) The axial-flow fan according to claim 1, wherein the cross section of the main ~~fin~~fins along the axial direction of the main shaft is ~~at least one of~~ streamlined and approximately streamlined, and wherein the cross section of the auxiliary fin is ~~at least one of~~ similar and approximately similar to the main ~~fin~~fins.

5. (Currently Amended) The axial-flow fan according to claim 1, wherein the thickness of the cross section of the auxiliary fin taken along the axial direction of the main shaft is not more than the thickness of the cross section of the main ~~fin~~fins taken along the axial direction of the main shaft.

6. (Currently Amended) The axial-flow fan according to claim 1, wherein one of the main ~~fin~~fins is arranged to be superposed on the adjoining main fins when being seen from the exhaust side.

7. (Currently Amended) The axial-flow fan according to claim 1, wherein a mirrored surface is formed on a positive pressure side and a negative pressure side of the main ~~fin~~fins.

8. (Currently Amended) The axial-flow fan according to claim 1, further comprising:

a motor that drives the main shaft;

a cylindrical frame that accommodates the main shaft, the main ~~fin~~fins, the auxiliary fin and the motor, the frame having openings on the intake side and the exhaust side; and

a spoke extending from an edge of the opening on the exhaust side of the frame approximately to a center of the opening to hold the motor,

wherein the spoke works as a guide fin in ~~discharging an~~ discharging air transferred by the main ~~fin~~ fins toward the outside of the frame.

9. (Currently Amended) The axial-flow fan according to claim 8, wherein the spoke is curved in a direction opposite to the rotary direction of the main ~~fin~~ fins, and has a curved surface adapted to scoop up the air transferred by the main ~~fin~~ fins.

10. (Currently Amended) The axial-flow fan according to claim 8, wherein the frame is made of ~~at least one of~~ a metal and a resin having high thermal conductivity.

11. (Currently Amended) The axial-flow fan according to claim 1, further comprising:

a frame that accommodates the main shaft, the main ~~fin~~ fins, the auxiliary fin and the motor for driving the main shaft, the frame having openings on the intake side ~~and the~~ and an exhaust side; and

a straightening plate having a tapered configuration of which a diameter of the plate becomes greater toward a direction opposite to a direction for transferring the air.

12. (Currently Amended) The axial-flow fan according to claim 1, further comprising:

a frame that accommodates the main shaft, the main ~~fin~~ fins, the auxiliary fin and the motor for driving the main shaft, the frame having openings on the intake side ~~and the~~ and an exhaust side; and

a filter attached on the frame to cover the opening on the intake side.

13. (Currently Amended) The axial-flow fan according to claim 12, wherein the opening of the filter has ~~at least one of~~ a polygonal and a circular profile, and

wherein the thickness of the filter is not less than 0.1 mm and not more than 5 mm.

14. (Currently Amended) The axial-flow fan according to claim 13, ~~wherein the~~ wherein a diameter of the opening of the filter is not less than 0.3 mm and not more than 3 mm, and

~~wherein the~~ wherein an opening ratio of the filter is not less than 70% and not more than 90%.

15. (Previously Presented) The axial-flow fan according to claim 12, wherein a predetermined gap is secured between the filter and the opening of the frame.

16. (Currently Amended) The axial-flow fan according to claim 1, further comprising:

a frame that accommodates the main shaft, the main ~~fin~~, fins, the auxiliary fin and the motor for driving the main shaft, the frame having openings on the intake side ~~and the~~ and an exhaust side; and

a cylindrical cover having a louver attached ~~thereinside, thereto,~~ the cover being provided on the exhaust side of the frame,

wherein the louver includes a plurality of louver components extending from the center of the cover to the periphery thereof, the louver components working as a guide fin in ~~discharging an~~ discharging air transferred by the main ~~fin~~ fins toward the outside of the frame.

17. (Currently Amended) The axial-flow fan according to claim 16, wherein the louver component is inclined in a direction opposite to the inclination of the main ~~fin~~ fins.

18. (Currently Amended) The axial-flow fan according to claim 1, further comprising:

a frame that accommodates the main shaft, the main ~~fin~~, fins, the auxiliary fin and the motor for driving the main ~~fin~~, fins, the frame having openings on the intake side ~~and the~~ and an exhaust side; and

a cylindrical cover having a louver attached thereinside, the cover being provided on the exhaust side of the frame,

wherein the louver includes a plurality of louver components disposed approximately in parallel, and

wherein the space between the adjoining louver components where light-shielding surfaces of the louver components are approximately orthogonal to the inclination of the main ~~fin~~ fins is broader than the space between the louver components where the light-shielding ~~surface is~~ surfaces are approximately parallel to the inclination of the main ~~fin~~ fins.

19. (Previously Presented) The axial-flow fan according to claim 16, wherein a predetermined gap is secured between the louver and the opening of the frame on the exhaust side.

20. (Previously Presented) A projector, comprising:
an optical system including an optical modulator that modulates a light beam irradiated by a light source in accordance with image information to project the light beam in an enlarged manner to form a projection image, and a fan for circulating an air,

wherein the fan is the axial-flow fan according to claim 1.